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contact layer to absorb light at a wavelength different from a wavelength of light absorbed by said quantum-well stack.--

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested. Applicants gratefully acknowledge the Examiner's helpful comments and suggestions on the drawings currently on record. Applicants are preparing revised drawings to correct the informalities and errors for filing at a later time.

Claims 2-11 have been newly added. No new matter is added. Claims 1-11 are currently pending upon entry of the amendment and are patentable.

Claim 1 stands rejected under 35 USC 112, second paragraph as allegedly being indefinite. This contention, however, is respectfully traversed. The claim language of "a quantum-well stack having a plurality of alternating quantum-well layers formed in parallel over said first conductive contact layer" is definite because the interpretations suggested in the Office Action should all be covered by Claim 1. The specific support for this aspect of Claim 1 may be found in page 4, lines 14-25 of the specification. Hence, Claim 1 is patentable under 35 USC 112, second paragraph.

Claim 1 also stands rejected under 35 USC 102(b) as allegedly being anticipated by Choi '015. Applicants respectfully traverse this rejection.

First, Claim 1 recites "a plurality of quantum-well structures, arranged in columnar shapes." Choi fails to teach this feature of Claim 1. Referring to FIGS. 5, 7-9, 12-15 in Choi, Choi discloses a quantum well detector with a grid of cavities formed to extend through the barrier layers, the well layers, and the upper contact layer. This grid of cavities is used to convert a portion of the input light into light with polarization substantially perpendicular to the quantum well layers to be absorbed. Notably, the cavities are embedded in the quantum well structure and do not partition the quantum well structure into separate quantum well structures in columnar shapes as recited in Claim 1.

Secondly, the quantum well structures in columnar shapes Claim 1 are "spatially separated from one another by a gap which is electrically insulating." Not so in Choi where only cavities are embedded in the quantum well structure. As a specific example, FIGS. 13, 14, and 15 in Choi shows the patterned but continuously-connected quantum well structure represented by the patterned top contact layer 226. This is entirely different from Claim 1.

In view of the above, Choi fails to teach each feature recited in Claim 1. Therefore, under 35 USC 102(b), Claim 1 is distinctly different from and is patentable over Choi.

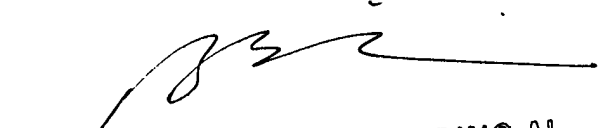
With respect to the double patenting rejection, Applicants file concurrently herewith a terminal disclaimer to obviate the rejection.

The newly-added Claims 2-11 are patentable over the prior art of record based on the above arguments for Claim 1 as well as on their own merits.

Therefore, all pending claims are now in full condition for allowance. Applicants respectfully request an official notice to that effect. A check in the amount of \$55 is enclosed for filing the terminal disclaimer. The Patent Office is authorized to apply any additional applicable charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Scott C. Harris
Reg. No. 32,030

BING AI
REG. NO 43,312

Fish & Richardson P.C.
Customer No. 20985
4350 La Jolla Village Drive, Suite 500
San Diego, California 92122
Telephone: (858) 678-5070
Facsimile: (858) 678-5099

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